INSTRUCTIONS

-J02811 REV. 2015-05-27

MULTI-FIT BRAIDED THROTTLE/IDLE CABLE KITS

GENERAL

Kit Numbers

See Table 1.

Models

For model and fitment information, see the P&A Retail Catalog or the Parts and Accessories section of www.harley-davidson.com (English only).

NOTE

The Multi-Fit Throttle/Idle Cable Kits are available in a variety of housing lengths, fitting angles, and travel lengths. Shorter or longer lengths may be necessary when modifications (i.e. optional handlebars) have been made to the motorcycle. See the P&A Retail Catalog for fitment and length information.

Additional Parts Required

⚠WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

NOTE

This instruction sheet references service manual information. A service manual for the specific model motorcycle is required for this installation and is available from a Harley-Davidson dealer.

Kit Contents

See Figure 11 and Table 2.

REMOVAL

⚠WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect negative (-) battery cable before proceeding. (00048a)

1. Disconnect battery cables, negative cable first or remove the main fuse following the instructions in the service manual.

Table 1. Kit Numbers

Model	Stainless Steel Kit	Diamondback Kit	Diamond-Black Kit	Angle	Length in. (cm)
Sportster® models (2006 and earlier)	56564-02	56715-06	N/A	45˚	28.5 (72.4)
Sportster® models (2007 and later)	N/A	56100196	56100197	45˚	28.5 (72.4)
Sportster® models	N/A	56726-07	38945-09	45˚	30.5 (77.5)
	56340-04	N/A	N/A		31.5 (80.0)
	56360-09	38906-07	38913-09		32.5 (82.5)
	56723-04	N/A	N/A		34.5 (87.6)
	N/A	N/A	56100019		25.5 (64.8)
	N/A	56100147	56100139	90˚	27.5 (69.9)
Softail® and Dyna® models	56345-03A	56808-05A	38947-09	90˚	26.5 (67.3)
	55715-07	38781-06	38946-09		28.5 (72.4)
	56344-03A	56807-05A	38954-09		30.5 (77.5)
	56579-02A	56805-05A	38918-09		32.5 (82.5)
	56350-03A	55700-07	38957-09		34.5 (87.6)
	56370-03B	55703-07	55748-10		36.5 (92.7)
	56371-03B	55706-07	55767-10		38.5 (97.8)
	55718-07	55709-07	N/A		40.5 (102.9)
	56373-03A	55712-07	N/A		42.5 (108.0)
	56720-03	N/A	N/A	70˚	32.5 (82.5)

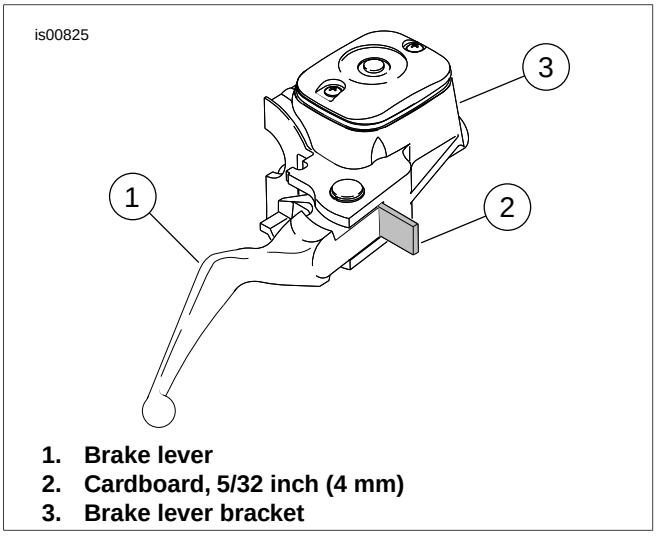
NOTE

When performing cable disassembly procedures, make careful notes as to the existing cable routing. Pay special attention to existing cable strap locations before removing so new straps can be placed into the same locations.

NOTICE

Do not remove or install the master cylinder assembly without first positioning a 5/32-inch (4 mm) thick insert between the brake lever and lever bracket. Removing or installing the master cylinder assembly without the insert in place may result in damage to the rubber boot and plunger on the front stoplight switch. (00324a)

2. See Figure 1. Place the cardboard insert between the brake lever and lever bracket.
3. See Figure 2. Loosen cable adjuster jam nuts. Turn cable adjusters in until they are as short as possible. This will provide enough slack for easy removal.
4. Remove the right upper and lower switch housing screws.



1. **Brake lever**
2. **Cardboard, 5/32 inch (4 mm)**
3. **Brake lever bracket**

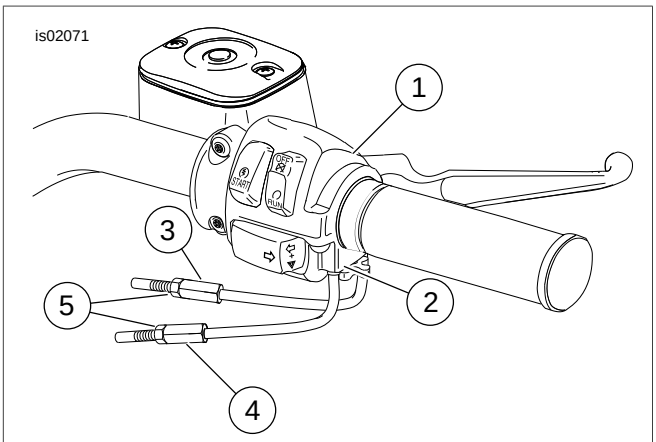
Figure 1. Install Cardboard Insert

5. Loosen the upper screw securing the handlebar clamp to the master cylinder housing. Remove the lower clamp screw and flat washer.

NOTE

If possible, leave the friction shoe in place. The friction shoe is a loose-fit and may fall out or become dislodged if the lower switch housing is turned upside down or shaken.

6. See Figure 3. Remove the brass ferrules from the notches on the inboard side of the throttle control grip. Remove the ferrules from the cable end fittings.
7. Pull the crimped inserts at the end of the throttle and idle control cable housings from the lower switch housing. For best results, use a rocking motion while pulling. Remove cables with retaining rings from switch housing. Apply a drop of light oil on the retaining ring, if necessary, to help in removal.



1. **Upper switch housing**
2. **Lower switch housing**
3. **Throttle cable adjuster**
4. **Idle cable adjuster**
5. **Adjuster jam nut**

Figure 2. Handlebar Throttle Control

NOTE

If you have or are installing different handlebars, measure the change in distance that will be required from the end of the cable housing to the throttle grip. Compare this additional required length to the cables provided in your kit.

If the cables are more than 2.0 inches (51 mm) longer or more than 1.0 inch (25 mm) shorter than the above measured distance, see a Harley-Davidson dealer for the correct cable length.

⚠WARNING

Install proper length throttle cables. Incorrect cable length can adversely affect motorcycle operation, which could cause loss of control resulting in death or serious injury. (00396b)

8. Remove air cleaner assembly following instructions in the applicable service manual.

NOTE

Raise fuel tank to access cables in area of frame backbone (if necessary). See the service manual.

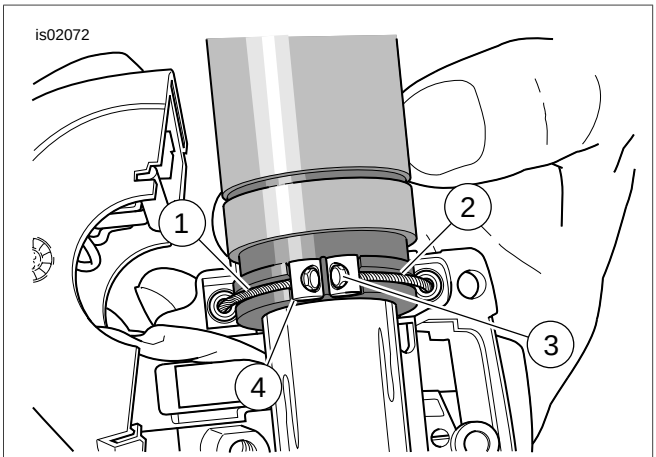
9. Remove cables at Carburetor/Induction Module as follows:

   Carbureted Models: See Figure 4. Remove cable barrel ends from holes in throttle wheel and release cable housings from cable guides on carburetor cable bracket.

   Fuel Injected Models: See Figure 5. Remove idle and throttle control cables from integral cable guides (1, 2) cast at front of induction module. See Figure 6. Pull cable barrels ends (2, 3) from holes in throttle wheel (1).

10. Cut and discard cable straps securing cables to frame backbone. If present, cut cable strap securing cable to coil bracket. Remove cables.
11. **For FL models:** Release the cables from the J-clamp fastened to the right side of the frame backbone. If present, remove bolt, washer, P-clamp and locknut to release cables from the steering head.

    For Dyna Models: Remove existing cable straps from holes in the frame. Make sure when routing replacement cables to use the same holes provided for the cable straps.



1. **Throttle cable**
2. **Idle cable**
3. **Brass ferrule**
4. **Notch**

Figure 3. Throttle/Idle Control Cables

INSTALLATION

Throttle and Idle Cable Installation

1. See Figure 3. Apply graphite lightly to the throttle grip inside the switch housing and on the throttle end of the handlebar.

NOTE

The throttle control cable has a larger diameter retaining ring crimped to the cable end than does the idle control cable.

For assembly, apply a drop of light oil on the retaining rings of the crimped inserts.

2. See Figure 7. Push the throttle cable housing and retaining ring into the larger hole of the switch housing, located in front of the tension adjuster screw.
3. Push the idle cable housing and retaining ring into the smaller hole of the switch housing, located behind the tension adjuster screw.
4. Push the throttle and idle control cable housings into the lower switch housing until each snaps into place.

NOTE

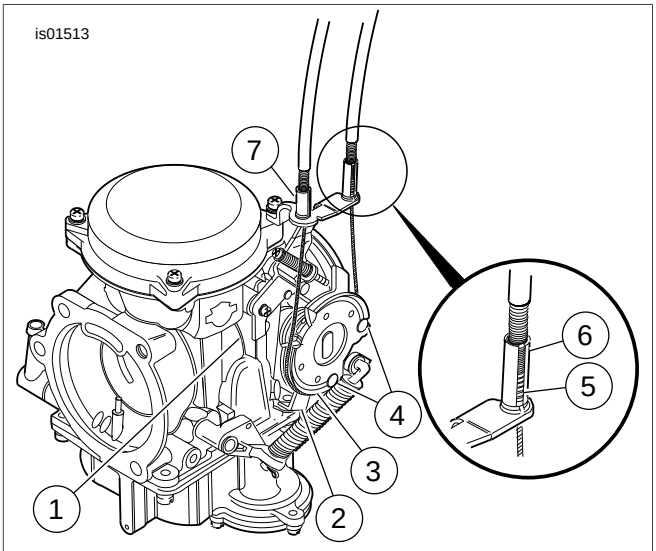
For models not equipped with factory-installed cruise control, if the friction shoe has fallen out or become dislodged, install the shoe with the concave side facing up and position it so the pin hole is over the point of the adjuster screw.

5. Push the throttle control grip over the end of the right handlebar until it bottoms against the closed end. Rotate the grip until the ferrule notches are at the top. To prevent binding, pull the grip back about 0.12 inch (3.2 mm).
6. See Figure 3. Position the lower switch housing beneath the throttle control grip. Install two brass ferrules (Item 3, Figure 11) from this kit onto cables, seating the ferrules in their respective notches on the throttle control grip. The cables must be captured in the grooves molded into the grip.
7. Position the upper switch housing over the handlebar and lower switch housing. Route the wire harness conduit through the depression at the bottom of the handlebar.
8. Tighten the upper and lower switch housing screws finger-tight.
9. Position the brake lever/master cylinder assembly inboard of the switch housing assembly, engaging the tab on the lower switch housing in the groove at the top of the brake lever bracket.
10. Align the holes in the handlebar clamp with those in the master cylinder housing and tighten the lower screw and flat washer finger-tight. Position for rider comfort. Beginning with the top screw, tighten the screws to 60-80 **in-lbs** (6.8-9.0 Nm).

NOTE

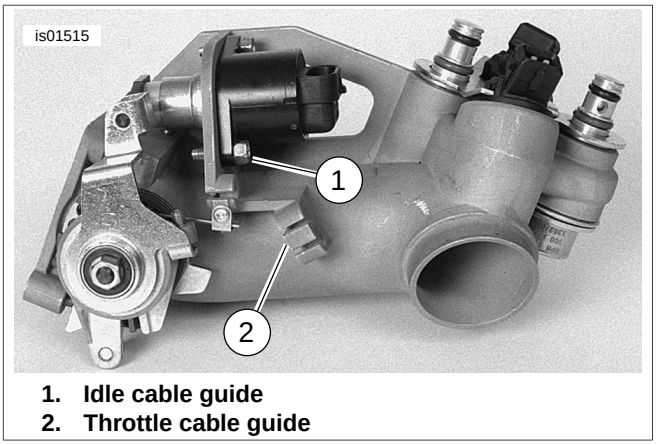
Always tighten the lower switch housing screw first so that any gap between the upper and lower housings is at the front of the switch assembly.

11. Tighten the lower and upper switch housing screws to 35-45 **in-lbs** (4-5 Nm).



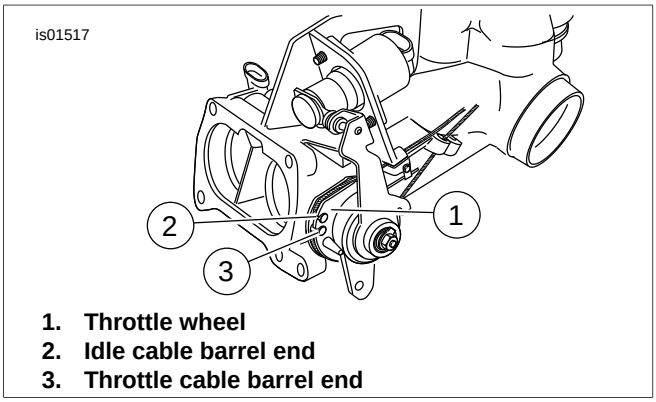
1. **Stop plate**
2. **Throttle cam stop**
3. **Throttle wheel**
4. **Cable barrel end**
5. **Spring**
6. **Idle cable guide**
7. **Throttle cable guide**

Figure 4. Throttle Cable Assembly (Carbureted Models)



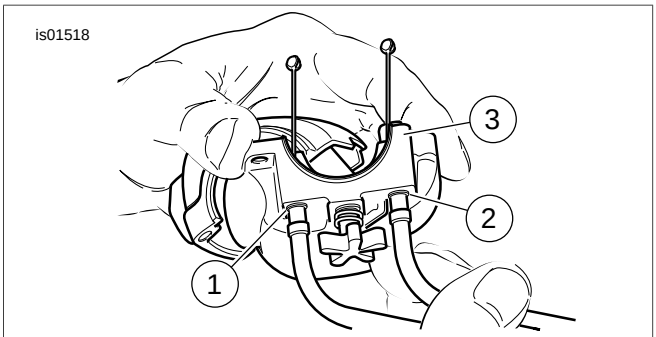
1. **Idle cable guide**
2. **Throttle cable guide**

Figure 5. Throttle Cable Assembly (Fuel Injected Models)



1. **Throttle wheel**
2. **Idle cable barrel end**
3. **Throttle cable barrel end**

Figure 6. Throttle Cable Assembly (Fuel Injected Models)



1. **Idle cable retaining ring**
2. **Throttle cable retaining ring**
3. **Lower switch housing**

Figure 7. Install Cable to Switch Housing

12. Remove the cardboard insert between the brake lever and lever bracket.
13. Refer to the THROTTLE AND IDLE CABLE ROUTING section below. Route cables according to the applicable model.

Sportster Models Throttle/Idle Cable Routing

Route control cables past left side of right turn signal. Loop back through area between headlight and right fork tube. Route rearward under gas tank and secure at clip under ignition switch, then down to carburetor/induction module.

Dyna Models Throttle/Idle Cable Routing

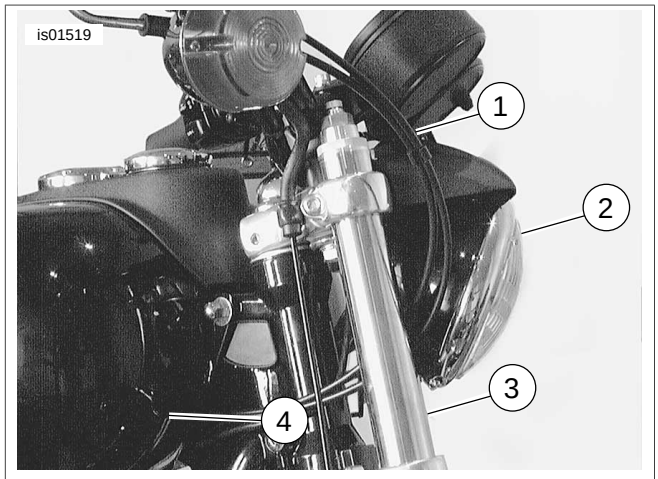
1. **1996-2005 FXD, FXDL, FXDX, FXDS Models:** See Figure 8. Route throttle and idle cables between headlamp and right front fork tube, then under right side of tank to carburetor/induction module.

   1996-2005 FXDWG Models: See Figure 9. Route throttle and idle cables behind the front fork upper bracket, then under right side of tank to carburetor/induction module.

   1996-2005 FXDXT Models: Route throttle and idle cables through wire form mounted to upper fork bracket, then under right side of tank to carburetor.

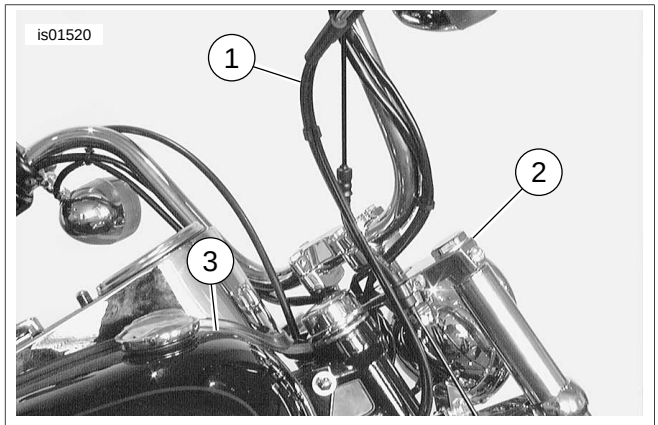
   2006-Later FXDi, FXDCi, FXDBi, FXD35, FXDWGi: See Figure 9. Route throttle and idle cables behind the front fork upper bracket, then under the right side of tank to the induction module.

2. **All Models:** See Figure 10. Orient the cable straps as shown, with the cable strap loop oriented downward. Stack the cables vertically as shown and tighten the cable straps.



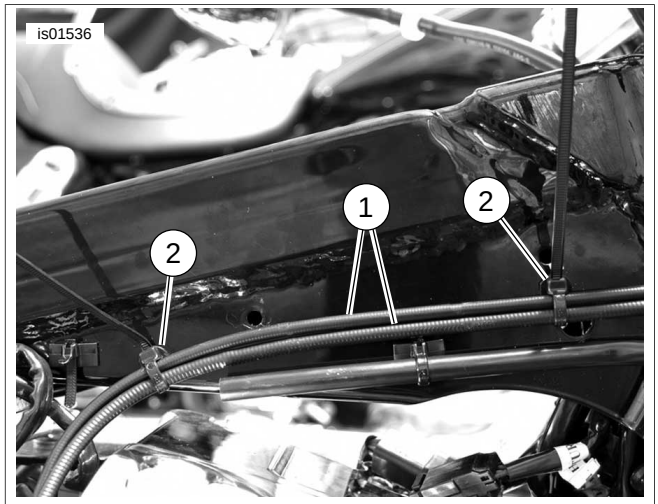
1. **Throttle/idle cables**
2. **Headlamp**
3. **Right front fork tube**
4. **Fuel tank**

Figure 8. Cable Routing (1996 - 2005 Dyna, Except FXDWG)



1. **Throttle/idle cables**
2. **Front fork upper bracket**
3. **Fuel tank**

Figure 9. Cable Routing (1996 - 2005 FXDWG, 2006 and Later Dyna Models)



1. **Throttle/idle cables stacked vertically**
2. **Cable strap (shown prior to trimming ends)**

Figure 10. Cable Routing (All Dyna Models)

Softail Models Throttle/Idle Cable Routing

All Softails Except FLSTS, FXSTS and FXSTD: Route throttle and idle cables between the brake line and handlebars. Pass cables under the top frame tube, between the harness connectors and the harness bracket, then to the carburetor/induction module.

FLSTS Softail Models: Route the throttle and idle cables through the wireform on the right side of the rigid fork, under the bottom frame bracket (held in place by a cable strap), then to carburetor/induction module.

FXSTS Softail Models: Route the throttle and idle cables over the handlebars, through the wireform on the right side of the rigid fork, then into the tunnel area under the fuel tank to carburetor/induction module.

FXSTD Softail Models: Route the throttle and idle cables forward from the throttle control, and between the brake line and handlebar riser to the right side of steering head. Continue under fuel tank along right side of frame backbone and back to carburetor/induction module.

Touring Models Throttle/Idle Cable Routing

FLHT, FLHTC/I and FLTRI:

1. Route the cables down following the brake line to the inner fairing. Pass the cables through the inner fairing grommet, then loop them back along the right side of the steering head.
2. From the right side of the steering head, route the throttle and idle cables along the right side of the frame backbone. After passing through the J-clamp on the frame backbone, route the cables down to the carburetor/induction module.
3. Following completion of cable to Carburetor/Induction Module connection procedures, insert the tapered end of new 14-inch cable strap between ignition coil and coil bracket welded to underside of frame backbone. When cable exits left side, raise both ends so that eye is centered above the frame backbone.
4. Verify that idle and throttle cables, wire bundles, wire harness and frame backbone are captured before mating cable strap ends. Tighten cable strap, but leave loose enough so that one finger can be inserted between strap and frame backbone. Do NOT over-tighten. Cut off excess cable strap material.

Final Installation

⚠WARNING

Install proper length throttle cables. Incorrect cable length can adversely affect motorcycle operation, which could cause loss of control resulting in death or serious injury. (00396b)

⚠WARNING

Pinched throttle cables can restrict throttle response, which could result in loss of control and death or serious injury. (00423b)

1. Install the carburetor/induction module side of the cables:

   Carbureted Models: See Figure 4. Install the idle cable housing and spring into the longer cable guide on the carburetor cable bracket. Route the idle cable down, fit barrel end into hole in throttle wheel (farthest from cam stop). Install the throttle cable housing into the shorter cable guide inserting barrel end into remaining hole in throttle wheel.

   Fuel Injected Models: See Figure 5 and Figure 6. Route the idle control cable around the top of the throttle wheel, insert barrel end into upper hole. Route the throttle control cable around the bottom of the throttle wheel and insert barrel end into lower hole. Using slots, slip throttle and idle control cables into cable guides cast at front of induction module.
2. Tighten cables as necessary to keep barrel ends from dislodging. Verify that cables are seated in channel of throttle wheel. Verify operation by turning throttle grip and observing cable action.
3. If loosened, tighten fuel tank hardware following instructions in applicable service manual.
4. Install air cleaner assembly following instructions in applicable service manual.
5. Adjust throttle and idle cables according to the instructions in the service manual.

⚠WARNING

Be sure that steering is smooth and free without interference. Interference with steering could result in loss of vehicle control and death or serious injury. (00371a)

NOTE

Turn the handlebars fully to the left and right stops and check the following items:

- *Cables should not catch on headlamp hardware or pass in front of headlamp.*
- *Cables should not catch on turn signal mounting hardware or turn signals.*
- *Cables should not catch on fuel cap or fuel gauge.*
- *Cables should not catch on speedometer or tachometer.*
- *Be sure cables are not pinched between the frame and/or forks.*
- *Be sure throttle/idle control cables do not pull tight when handlebars are turned fully to left or right fork stops.*
- *Cables should return freely from full-open to full-closed.*

⚠WARNING

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

6. Connect battery cables, positive (+) cable first or install the main fuse (if removed).

⚠WARNING

Be sure that all lights and switches operate properly before operating motorcycle. Low visibility of rider can result in death or serious injury. (00316a)

7. Turn the ignition/light key switch on and apply the brake lever to test operation of the brake lamp.

SERVICE PARTS

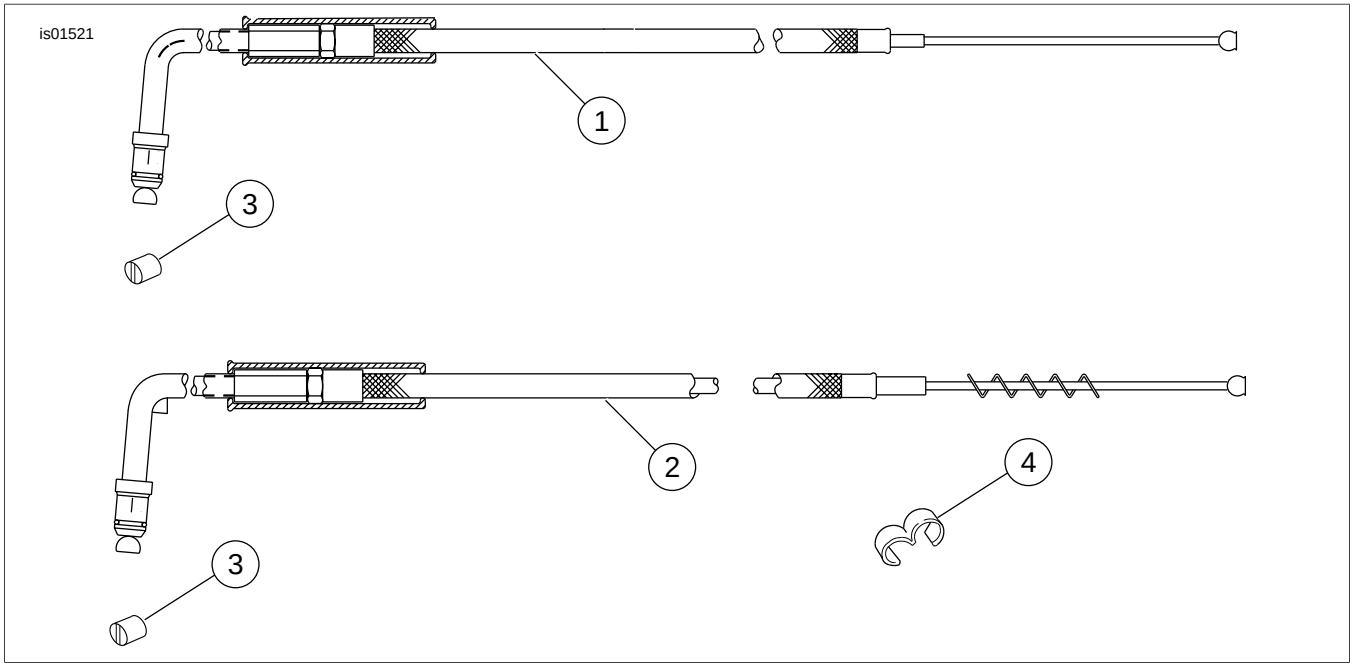


Figure 11. Service Parts: Multi-Fit Braided Throttle/Idle Cable Kits

Table 2. Service Parts: Multi-Fit Braided Throttle/Idle Cable Kits

Item	Description (Quantity)	Part Number
1	Cable, throttle control, braided	Not Sold Separately
2	Cable, idle control, braided	Not Sold Separately
3	Ferrule, wire control (2)	56508-76
4	Clip, throttle/idle cable	70514-01
5	Strap, cable, 7.5 inch (2) (not shown) (not included in all kits)	10006
6	Strap, cable, 7.8 inch (3) (not shown) (not included in all kits)	10073
7	Strap, cable, 6.0 inch (not shown) (not included in all kits)	10065
8	Corrugated tube (2) (not shown) (not included in all kits)	Not Sold Separately